

METHOD AND APPARATUS FOR CONTROLLING TEMPERATURE
GRADIENTS WITHIN A STRUCTURE BEING COOLED

ABSTRACT OF THE DISCLOSURE

A phased array antenna apparatus has a plurality of circuit portions which are each coupled to a respective antenna element. Capillary pressure of a cooling fluid within a wick in a loop is utilized to urge the fluid to travel around the loop, the wick being disposed in the region of the circuitry. In a variation, there are plural wicks in respective evaporators, and cooling fluid is distributed among the evaporators through a series of T-junctions. In another variation, cooling fluid is distributed to a plurality of evaporators in a sequence corresponding to a progressive increase in the respective amounts of heat accepted by the evaporators from structure being cooled.